



Energy & Technology Committee
Public Hearing
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In Support Of:

Senate Bill No. 1, AN ACT CONCERNING CONNECTICUT'S ENERGY FUTURE

Connecticut Fund for the Environment ("CFE") is Connecticut's non-profit environmental advocate with over 5,700 members statewide. For over thirty years, CFE has fought to protect and preserve Connecticut's health and environment.

Senator Fonfara, Representative Nardello and members of the Energy & Technology Committee, Connecticut Fund for the Environment offers this testimony in Support of SB 1, An Act Concerning Connecticut's Energy Future. I will focus my testimony on several specific sections of the bill.

Section 33. Places the Council on Environmental Quality under the jurisdiction and authority of DEEP. CFE believes that the Council on Environmental Quality's ability to maintain its role as a watchdog on the environmental performance of the Department may be hobbled as a result of this change. CEQ should continue to be within DEEP (formerly DEP) for "administrative purposes only," as the original language of the statute directs, and should otherwise maintain its independence.

Section 45. This section does two things. First, it provides a clear timeframe for DEEP to identify and adopt new and improved efficiency standards for consumer goods. Despite a clear legislative mandate to promote energy conservation in the state by adopting efficiency standards for new products on an ongoing basis, action has thus far only been taken in response to the express direction and identification of new standards by the General Assembly. This legislation clarifies and reinforces existing law.

Second, this legislation direct DEEP to adopt regulations establishing minimum energy efficiency standards for consumer electronic products such as compact audio products, DVD players and recorders and televisions when they are in "stand-by passive mode." This is the state when an appliance is nominally turned off but is still drawing power so that it ca be turned on remotely (commonly referred to as "phantom" or "vampire" power). The standards also

establish maximum power usage levels for televisions when they are "on mode," or actively in operation.

As residential electricity usage, costs and green house gas emissions continue to rise, it is increasingly important to take advantage of every opportunity to use energy more wisely. Appliance standards are an important part of the energy efficiency solution. While Connecticut has been recognized as a national leader in promoting energy conservation, in order to meet the energy efficiency and greenhouse gas reduction goals that the state has set for itself, we must continue to identify and adopt efficiency measures in a timely and efficient manner.

Improving appliance efficiency has significant potential for cutting electricity demand, air pollution and greenhouse gas emissions. Nationwide, homes spend about a third of their energy use on appliances, computers and other electronics. Entertainment devices are among the biggest culprits when it comes to standby power consumption: 40 percent of all electricity used to power consumer electronics is used when the products have been turned off and are in standby mode. According to the International Energy Agency, roughly \$4 billion annually across the United States is spent on electricity lost to "phantom power."

Efficiency standards for the seventeen products Connecticut has already adopted are cutting the state's carbon emissions by 158,000 metric tons, while also reducing energy bills for consumers.

This section is identical to a bill that was voted out of the Energy & Technology Committee last year (HB 5217). In the intervening year, increasing attention has been paid to the importance of establishing efficiency standards for televisions. The federal government has indicated its intent to adopt television standards at the national level, although when such standards would take effect is not known at this time. And, contrary to the claims of industry raised last year that such efficiency standards are inappropriate and would stifle innovation, an increasing number of televisions on the market today are proving that the standards are achievable and do not hamper the development of televisions with an increasing number of technological features, such as web access and 3-D capability. In the meantime, adopting standards at the state level will ensure that Connecticut does not become a dumping ground for the least efficient models on the market while we wait for the federal standards to become effective.

Finally, it is worth noting that there is no inconsistency between designing voluntary efficiency targets through a labeling program such as Energy Star while also requiring minimum energy efficiency standards for all products. The Energy Star designation is designed as a moving target, designed to spur innovation in the top end of the market. This, in essence, sets an aspirational target for products at the top end of the market to distinguish themselves. At the same time, minimum standards establish a floor below which no product can fall, largely in recognition of what is cost-effectively achievable.

Accordingly, CFE fully supports adoption of minimum energy efficiency standards for televisions and other electronic devices.

Section 51. Authorizes municipalities to adopt Property Assessed Clean Energy ("PACE") programs. It is clear that additional financing mechanisms are essential if Connecticut's building energy efficiency efforts are to achieve the breadth and depth of market penetration that is necessary to have a substantial impact. CFE believes that the state should adopt a portfolio of

financing mechanisms to achieve significant expansion of energy efficiency retrofit work in the state.

This enabling legislation, allowing municipal property tax financing for energy efficiency and renewable energy improvements to existing buildings and allowing the issuance of municipal bonds to support that work, is a good first step. In addition, Connecticut should investigate opportunities to expand financing through leveraging of federal stimulus dollars, attracting additional private investment and the creation of a statewide revolving loan fund. Given the scale of the challenge, no one pathway is likely to cover the entire available market.

The amount of financing available to invest in efficiency must be greatly expanded to reach more buildings and provide for greater per unit investment. 84% of the state's housing stock was built before 1980 and 45% was built before 1960. Given that these residential buildings alone account for more than 20% of the state's greenhouse gas emissions and that they were built prior to the adoption of any meaningful energy code in Connecticut, we must improve their performance if we wish to reduce emission from the building sector in a meaningful way. Under the current efficiency programs approximately 1.5% of the state's housing stock can access the state's efficiency funds each year and those funds only cover the most basic improvements. At this rate it will take decades to reach a majority of the market and many opportunities will be missed.

If building owners improved the efficiency of their buildings by just 10%, by 2015 the country could reduce GHG emissions by more than 20 MMTCO₂ e, equivalent to the emissions of about 15 million vehicles. (based on data from the U.S Dept. of Energy's Energy Information Administration 2003).

This target should be easy to reach with the right investment. A variety of simple, common cost-effective measures can significantly reduce energy demand:

Air sealing (Insulation/window replacement)	20%
Duct Repair and sealing	15%
HVAC equipment upgrade	20%
Lighting and appliance upgrades	10%

An analysis focusing specifically on fuel oil performed by the American Council for an Energy Efficient Economy has found that cost-effective efficiency measures for existing residential buildings can reduce oil consumption by 36% or 209 gallons of fuel oil per year. (Reducing Oil use Through Energy Efficiency: Opportunities beyond cars and light trucks (ACEEE January 2006).

However, these measures involve up-front costs that can deter homeowners from moving forward. PACE programs overcome this barrier by providing low-interest, long-term loans that result in a neutral or positive cash-flow for the homeowner. And these programs are voluntary. Local governments get to decide whether or not to pursue these bonds, and individual property owners decide whether to opt in.

Accordingly, CFE fully supports providing municipalities the authority to adopt PACE financing programs.

SECTIONS 57-63. Establish several important policies designed to spur the development and deployment of solar resources. These sections are largely identical to the language raised in the last two major solar bills in 2009 and 2010 (both of which passed the legislature by large margins). Specifically, these sections include incentives for 30 MW of residential solar (section 57); establishment of an SREC program similar to the successful New Jersey program (section 58); direction to the utilities to develop a solicitation plan for long-term contracting for solar RECS or in-state generation (section 59), a solar feasibility study for state-owned facilities (section 60) and Section 61 long-term contracts and tariffs based incentives for up to 50 MW of utility scale solar (from 1 MW to 7.5 MW) (section 61); direction to the Clean Energy Fund and Energy Efficiency Fund to coordinate on the development of solar thermal incentive programs (section 62), and the prioritization and creation of incentives for solar installations that use system components manufactured or assembled in Connecticut (section 63).

These provisions will create a long-term, stable plan for increasing the amount of solar photovoltaic capacity deployed in the state. This is the secret to developing and maintaining a healthy solar industry in Connecticut. There has been a lot of talk about creating "green jobs" here at home, and this bill is a key element in achieving that goal.

We have to remember that Connecticut is competing with neighboring states such as Massachusetts and New York that have established very aggressive renewable energy goals. If Connecticut does not keep pace, renewable energy jobs will migrate to those markets.

In Section 59, the bill directs the state's electric utilities to develop solar solicitation plans for long-term solar renewable energy credits or energy contracts from in-state generators. This will help to ensure the market stability necessary for developers of clean energy technology to obtain financing to build their projects. The only substantive difference from earlier iterations of the solar bill that CFE would note is the reduction of the time horizon for the solar solicitation plan from 10 years to 5 years. Shortening this period will likely ensure that the program runs into the cost caps imposed by Section , limiting the success of the program and defeating the original goals. Accordingly, we would urge the Committee to amend this section to restore the original 10-year time horizon.

Thank you for the opportunity to testify.



ENERGY EFFICIENT PRODUCTS FAQ

Appliance and equipment efficiency standards reduce energy use, save consumers and businesses money, and cut power plant pollution that harms public health and the environment.

Objective: To provide for regular ongoing identification and adoption of energy efficiency standards for new products. Connecticut will work with the Multi-State Appliance Standards Collaborative to continue to identify additional opportunities for efficiency standards for new products. Such standards will be adopted absent an affirmative showing that they are not appropriate for Connecticut. In the short-term, Connecticut's appliance standards will be updated to incorporate recent efficiency standards for compact audio products and televisions already adopted by several of our sister states.

Background: States can adopt energy efficiency standards for any products that are not covered by federal efficiency standards.

Connecticut first adopted energy efficiency appliance standards for eight products in 2004 (P.A. 04-85). Those standards are anticipated to reduce the state's greenhouse gas emissions by more than 74,000 metric tons. In 2007, Connecticut adopted standards for nine additional classes of products (P.A. 07-242), reducing the state's carbon emissions by an additional 84,000 metric tons.

Conn. General Statutes § 16a-48 directs OPM to adopt regulations to designate efficiency standards for additional products not enumerated in the law upon a determination that such efficiency standards "(A) would serve to promote energy conservation in the state, (B) would be cost-effective for consumers who purchase and use such new products, and (C) that multiple products are available which meet the standards, provided that no such standards shall become effective within one year following their adoption."

What does this bill do?

It updates Connecticut's list of energy efficient appliances to reflect recent standards for televisions and electronic products. It also establishes a clear and definite timeline for DEEP to discharge its responsibilities to adopt appropriate appliance standards on an ongoing basis. It directs DEEP to work with the Multi-State Appliance Standards Collaborative to identify additional appliance efficiency standards. Once standards have been identified, OPM must determine whether the standard meets the criteria set out in current law within six months.

Why is this legislative fix necessary?

Despite a clear legislative mandate to promote energy conservation in the state by adopting efficiency standards for new products on an ongoing basis, the state has thus far only acted in response to the express identification of new standards by the General Assembly. Requiring legislative action each time the state wishes to adopt efficiency standards is inefficient and contrary to the clear legislative intent of Conn. General Statutes § 16a-48.

Are these standards achievable? Can manufacturers meet them?

Yes. The efficiency standards for many of these electronic products are equivalent to the current Energy Star rating. The market penetration for Energy Star certified models covers from one-third to one-half of such devices. In the case of televisions, more than 1,000 models on the market already meet the standard.

Will these standards result in significant energy savings and emissions reductions?

Yes. According to an analysis performed in 2009, adopting efficiency standards for compact audio products would reduce energy consumption in Connecticut by more than 25 GW by 2020 (enough to power nearly 3,000 homes), reduce greenhouse gas emissions by approximately 6,000 metric tons (equivalent to removing 1,150 vehicles from the road), and reduce other air pollutants by more than 50 tons. Adopting efficiency standards for televisions would reduce energy consumption in Connecticut by 189 GW by 2020 (enough to power more than 20,000 homes), reduce greenhouse gas emissions by more than 105,000 metric tons (equivalent to removing more than 20,000 vehicles from the road), and reduce other air pollutants by more than 600 tons. While the energy efficiency of these products has improved over the last two years (so the numbers above may be slightly lower), there still remain significant benefits to be achieved by establishing minimum performance standards.

Are these standards cost-effective?

Yes. Efficiency measures to reduce standby power are relatively simple and inexpensive. The estimated incremental cost of reducing phantom power loads is about \$1 – an amount earned back in lowered energy bills in three to twelve months depending upon the product. The efficiency of televisions can be improved with no incremental cost increase.

Will adopting additional standards unduly burden DEEP?

No. There is a currently existing framework which significantly reduces the administrative burden on OPM. Connecticut is currently a member of the Multi-State Appliance Standards Collaborative. The Multi-State Appliance Standards Collaborative has developed a product database for several products with common standards across states. Many of the standards are adopted directly from the California State Appliance Energy Efficiency Standards, Title 20 (as are many of Connecticut's current appliance efficiency standards). Connecticut can simply adopt California's standard for these products by reference, as it has already done with other products.

Furthermore, manufacturers can comply with Connecticut's standard by certifying their products to the California Energy Commission, relieving Connecticut of the burden of independently verifying and certifying products.